



02-12-07

CAC

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Edwin A. Suominen Patent No. : 7,116,963
Serial No. : 10/649,305 Issue Date : October 3, 2006
Filing Date : August 25, 2003
Title : Simplified High Frequency Tuner and Tuning Method

ATTN: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

(E010066091BUS)

REQUEST FOR CERTIFICATE OF CORRECTION

Dear Sir:

Pursuant to 37 C.F.R. 1.322 and MPEP 1480.01, applicant respectfully requests expedited issuance of a Certificate of Correction for a mistake incurred through the fault of the office in the patent referenced above. Enclosed is a Form PTO/SB/44 containing the proposed Certificate.

In accordance with the requirements of MPEP 1480.01, this Request is accompanied by portions of the application file of this patent showing that the error is attributable solely to the Office. Pages 1, 3, and 5 are enclosed from Applicant's Response to Office Action dated May 3, 2006, along with the Notice of Allowability "responsive to the Amendment filed 5/3/06."

Page 3 of the Response contains the final amendment to what was claim 7 and issued as claim 3. As shown, the preamble should read "A tuning method comprising:".

Page 5 of the Response contains the final amendment to what was claim 14 and issued as claim 6. As shown, the preamble should read "Apparatus for tuning, from a channelized spectrum having a predetermined channel spacing, a channel of interest, the apparatus comprising:".

Applicant also notes that claim 26 as issued has a spurious line break between the words "upper" and "high" in part (d), at C23/L56. It is clearly understood,

Certificate
FEB 16 2007
of Correction

FEB 20 2007

however, that the text from C23/L52-60 is all part of the claim's part (d), and formal correction is not required.

A Form PTO/SB/123 (copy enclosed) is being filed under separate cover notifying the Office of a change in the correspondence address for this patent. Please direct correspondence concerning the requested Certificate of Correction to the new address, as listed below.

Respectfully submitted,



Dated: February 9, 2007

Edwin A. Suominen
Reg. No. 43,174

3355 E. Jump Off Joe Rd.
Valley, Washington 9918
(509) 937-2627

}
}

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : 7,116,963

APPLICATION NO.: 10/649,305

ISSUE DATE : October 3, 2006

INVENTOR(S) : Suominen; Edwin A. (Valley, WA)

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the claims, column 20, line 53, should read as follows: "3. A tuning method comprising:".

In the claims, column 21, line 25, should read as follows: "6. Apparatus for tuning, from a channelized spectrum having".

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Edwin A. Suominen
3355 E. Jump Off Joe Rd.
Valley, WA 99181

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

FEB 20 2007



MAY 03 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Edwin A. Suominen Art Unit: : 2688
Serial No. : 10/649,305 Examiner: : Bhattacharya, S.
Filing Date : August 25, 2003
Title : Simplified High Frequency Tuner and Tuning Method

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

CERTIFICATE OF TRANSMISSION UNDER 37 CFR 1.6: I hereby certify that this paper and any items referred to herein as being included are being facsimile transmitted to the United States Patent and trademark Office,

Fax No. 571-273-8300, on May 3, 2006

Edwin A.
Suominen
by
(Name)

(Signature)

RESPONSE TO OFFICE ACTION

Dear Sir:

Responsive to the Office Action dated April 5, 2006, applicant submits the following amendments and remarks:

- Amendments to the Claims reflected in the listing of claims that begins on page 2 of this paper.
- Remarks beginning on page 23 of this paper.

A Terminal Disclaimer in compliance with 37 C.F.R. § 1.321(c) is enclosed. Also enclosed is a Form PTO-2038 authorizing credit card payment of \$330 to cover the large-entity fees for the Terminal Disclaimer (\$130) and a fourteenth independent claim now pending (\$200), one more than the thirteen already paid for.

05/04/2006 MBINAS 00000042 10649385

01 FC:1201

200.00 0P

FEB 20 2007

20 2007

Claim 4 (original) The method of claim 3 further comprising coarse-tuning the local oscillator signal by one local oscillator step from the first frequency to a second frequency an integral number of channel spacings from the first frequency.

Claims 5-6 (canceled)

Claim 7 (currently amended) ~~The A tuning method of claim 1 further comprising:~~

- (a) mixing a channel of interest from a channelized spectrum having a predetermined channel spacing with a first local oscillator signal;
- (b) mixing the channel of interest with a second local oscillator signal having the first frequency and being approximately in quadrature with the first local oscillator signal;
- (c) wherein the first local oscillator signal has a first frequency that is (1) one-half of a channel spacing displaced from an integer multiple of the channel spacing, and (2) selected to frequency translate the channel of interest to within a passband whose lower edge is spaced from DC by about the channel spacing and whose width is about the channel spacing.

Claims 8-9 (canceled)

Claim 10 (currently amended) ~~The A tuning method of claim 1 wherein comprising:~~

- (a) mixing a channel of interest from a channelized spectrum having a predetermined channel spacing with a first local oscillator signal;

Serial No. 10/649,305

Page 3 of 25

FEB 20 2007.

Claims 12-13 (canceled)

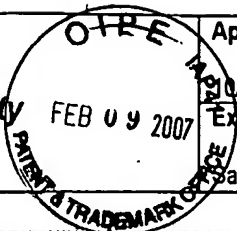
Claim 14 (currently amended) ~~The A[a]pparatus of claim 13~~ for tuning, from a channelized spectrum having a predetermined channel spacing, a channel of interest, the apparatus further comprising:

- (a) a local oscillator configured to generate a local oscillator signal at a first frequency that is one-half of the channel spacing displaced from an integer multiple of the channel spacing; and
- (b) a mixer responsive to the local oscillator signal and the channel of interest, wherein the mixer frequency translates the channel of interest;
- (c) a second local oscillator configured to generate a second local oscillator signal having the first frequency and being approximately in quadrature with the first local oscillator signal; and
- (b) (d) a second mixer responsive to the second local oscillator signal and the channel of interest, wherein: (1) the channel of interest lies within one of an upper high frequency spectrum of interest and a lower high frequency spectrum of interest; and (2) the apparatus provides spectrum coverage within one of the high frequency spectra of interest and not the other;
- (e) the frequency-translated channel of interest falls within a passband that is about a channel spacing wide and that is spaced from DC by a frequency offset of about the channel spacing; and

Serial No. 10/649,305

Page 5 of 25

FEB 20 2007

Notice of Allowability

Application No.

210/649,305

Examiner

Sam Bhattacharya

Applicant(s)

SUOMINEN, EDWIN A.

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed 5/3/06.
2. ☒ The allowed claim(s) is/are 3, 4, 7, 10, 11, 14, 17-23, 25-30, 33-39, 41, 44, 46, 47, 49-53, 59-61, 63, 65, 69, 70, 73, 74, 77, 78, 81, 82, 85, 88, 89 and 136-155.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.


4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |


GEORGE ENG
SUPERVISORY PATENT EXAMINER



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

CHANGE OF CORRESPONDENCE ADDRESS Patent

Address to:
Mail Stop Post Issue
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Patent Number	7,116,963
Issue Date	October 3, 2006
Application Number	10/649,305
Filing Date	August 25, 2003
First Named Inventor	Suominen, Edwin A.
Attorney Docket Number	

Please change the Correspondence Address for the above-identified patent to:

☐ The address associated with Customer Number:
OR

☒ **Firm or Individual Name** Edwin A. Suominen
3355 E. Jump Off Joe Rd.

Address

City Valley State Washington ZIP 99181

Country USA

Telephone 509-937-2627 Email

This form cannot be used to change the data associated with a Customer Number. To change the data associated with an existing Customer Number use "Request for Customer Number Data Change" (PTO/SB/124).

This form will not affect any "fee address" provided for the above-identified patent. To change a "fee address" use the "Fee Address Indication Form" (PTO/SB/47).

I am the:

- ☒ Patentee.
- ☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).
- ☒ Attorney or agent of record. Registration Number 43,174

Signature

Typed or Printed Name Edwin A. Suominen.

Date February 9, 2007

Telephone 509-937-2627

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Post Issue, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

FEB 20 2007